

Innovation Matrix

Product Catalog

Introducing



Bridging the Pacific with Automation Technology

Adept Viper™ s650



The Adept Viper 6-axis robot family is a high-performance line of robots designed specifically for assembly applications. The speed and precision of the Adept Viper robots make them ideal for material handling, packaging, machine tending, and many other operations requiring fast and precise automation. The Adept Viper robot family is being introduced with the Adept Viper s650 and Adept Viper s850 robots.

Robot Specifications

Reach	653 mm
Payload	2.5 kg (rated) 5 kg (max)
Joint Range	
Joint 1	±170°
Joint 2	-190°, +45°
Joint 3	-29°, +256°
Joint 4	±190°
Joint 5	±120°
Joint 6	±360°
Inertia Moment (max)	
Joint 4	0.295 kgm ²
Joint 5	0.295 kgm ²
Joint 6	0.045 kgm ²
Composite Speed (max)	8,200 mm/sec
Joint Speeds	
Joint 1	328°/sec
Joint 2	300°/sec
Joint 3	375°/sec
Joint 4	375°/sec
Joint 5	375°/sec
Joint 6	600°/sec
Repeatability (XYZ)	±0.020 mm
Pass-Through User Connections (routed from robot base to outer link)	
Electrical	10
Pneumatic	1
Brakes	Joints 2 - 6
Internal Solenoids	Three 2-position solenoids (connected to controller by user)
Ingress Protection	IP40 (IP54/65 optional)
Mounting	Floor/Table and Ceiling
Weight (approx)	28 kg

Performance

- Absolute encoders make for easy calibration
- Complete interchangeability between robots and controllers
- High-resolution encoders provide high-precision and superior slow-speed following
- High-efficiency motors deliver high performance with more torque per amp
- 8 kHz servo update rate for improved path following and control

Reliability and Maintenance

- Proven design offers high reliability and low MTTR
- Diagnostics display enables faster troubleshooting

System Includes

The Adept Viper s650 system includes the following:

- Adept Viper 650 Robot
- Adept SmartController CX (with software installed)
- PA-4 Amplifier Chassis with servo controller and amplifiers
- Front Panel with E-Stop
- 4 Meter Robot Cable
- AdeptWindows Software
- Network File Server (NFS) software
- Ethernet TCP/IP capability
- User Documentation

User Supplied Items

The user must supply the following items:

- Power to SmartController and PA-4 Amplifier Chassis (see power requirements)
- Cell-based emergency stop wiring
- Windows™-based PC (not required at run-time)

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